Formative Assessment Task

2nd Grade: Measurement and Data

### 2.MD.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put- together, take-apart, and compare problems using information presented in a bar graph.

### Learning Targets:

* I can make a picture or bar graph with up to four categories to represent data.

**Materials:**

1. One graph page per child. (See below and print.)
2. Crayons and a pencil for each child.
3. Timer. (for teacher)

**Directions:**

*Students will work in pairs, or at a math center for this game.*

*NOTE: As an alternative to the directions below, you may choose to provide a bag of color tiles to complete the activity to create a fixed data set.*

1. Give each child one page.
2. Instruct children to look for as many red items in the classroom as they can in 2 minutes.
3. As they find them, student should color in a block above “red” on the bar graph.
4. Instruct children to look for as many blue items in the classroom as they can.
5. As they find them, student should color in a block above “blue” on the bar graph.
6. Repeat for green and yellow items on the bar graph.
7. Collect the formative assessments.

**Considerations:**

* This Formative Assessment is designed to observe student ability to create the graph.
* Teachers may want to keep these bar graphs and use the data students collected to compare the data and to solve addition and subtraction problems based on their data. These are the other learning targets for this objective.

**Our Colorful Classroom**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 10 |  |  |  |  |
| 9 |  |  |  |  |
| 8 |  |  |  |  |
| 7 |  |  |  |  |
| 6 |  |  |  |  |
| 5 |  |  |  |  |
| 4 |  |  |  |  |
| 3 |  |  |  |  |
| 2 |  |  |  |  |
| 1 |  |  |  |  |

Red Blue Green Yellow

Number of Items Found

Color of Classroom Items

|  |
| --- |
| Teacher notes:  Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve a simple put-together, take-apart, and compare problems for using information presented in a bar graph.  Collecting data to answer a question is an important skill. Once the data have been collected, representing it in a picture or bar graph helps us analyze what we have discovered. Using an appropriate graph to display data is an important part of this standard. Once the graph has been constructed, it is important that questions are asked to talk about the information that is displayed in the graph. Questions should be more than "How many?" Questions should focus on drawing conclusions, comparing, and make generalizations about the data that are represented in the graph.  Students who demonstrate complete mastery correctly complete the bar graph.  Students who demonstrate partial accomplishment may draw a picture or put an x an in each box instead of coloring in the correct number of boxes in each column of the bar graph. |
| |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Not yet:** Student shows evidence of misunderstanding, incorrect concept or procedure | | | **Got It:** Student essentially understands the target concept. | | | | **NEEDS IMPROVEMENT**  **(N)** | | **WITH ASSISTANCE**  **(W)** | | | **INDEPENDENT**  **(I)** | | **0 Unsatisfactory:**  **Little Accomplishment**  The task is attempted and some mathematical effort is made. There may be fragments of accomplishment but little or no success. Further teaching is required. | **1 Marginal:**  **Partial Accomplishment**  Part of the task is accomplished, but there is lack of evidence of understanding or evidence of not understanding. Further teaching is required. | | **2 Proficient:**  **Substantial Accomplishment**  Student could work to full accomplishment with minimal feedback from teacher. Errors are minor. Teacher is confident that understanding is adequate to accomplish the objective with minimal assistance. | **3 Excellent:**  **Full Accomplishment**  Strategy and execution meet the content, process, and qualitative demands of the task or concept. Student can communicate ideas. May have minor errors. | |   Adapted from Van de Walle, J. (2004) Elementary and Middle School Mathematics: Teaching Developmentally. Boston: Pearson Education, 65 |